

We claim:

- 5 1. A process for the electrolytic transformation of at least one organic compound in an electrolysis cell, wherein the organic compound is both oxidized and reduced at one electrode.
- 10 2. A process as claimed in claim 1, wherein the organic compound is both oxidized and reduced, in particular hydrogenated, at the anode.
- 15 3. A process as claimed in claim 1 or 2, wherein the electrode is in contact with at least one hydrogenation catalyst, in particular a noble metal.
- 20 4. A process as claimed in claim 3, wherein the hydrogenation catalyst, in particular the noble metal, is applied to a graphite felt.
- 25 5. A process as claimed in claim 3, wherein the hydrogenation catalyst is deposited on the anode from suspension.
- 30 6. A process as claimed in claim 3, wherein the hydrogenation catalyst in the form of a suspension is brought into contact with the anode.
7. A process as claimed in claim 1, wherein the organic compound is both reduced and oxidized, in particular oxygenated, at the cathode.

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- 13 -

8. A process as claimed in any of claims 1 to 7,
wherein the electrode is a gas diffusion
electrode.
- 5 9. A process as claimed in any of claims 1 to 8,
wherein the organic compound is furan and/or a
furan derivative.

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